

Status of Recommendations from May 2001 DOE Review

Recommendation Text		Status
IR Quadrupoles (WBS 1.1.1)		
1	Define the acceptance criteria for the quadrupole magnets and secure CERN concurrence prior to the Production Readiness Review scheduled for summer 2001.	The PRR has been split into two parts, with the 2nd covering the assembly of the multiple magnet elements and their insertion into the cryostat. The Acceptance Plan is a requirement for passing the cryostat PRR. The Acceptance Plan is currently under preparation by Fermilab following meeting with CERN personnel in September.
2	Resolve the remaining interface issues to confirm the quadrupole production schedule.	Cryostat and magnet interfaces have been resolved except details of the flange connecting the cold mass to the beam tube. This is the last item which will directly impact quadrupole production. CERN is evaluating two variations, both of which are acceptable to us, and their deliberations are being followed closely. Attention is turning to the interfaces in the interconnects, where further iteration with the CERN Vacuum Group is required. These components are used only at installation in LHC and do not affect the magnet designs.
3	Maintain management vigilance in implementing the ramp-down of EDIA and technician resources to avoid potential cost overruns.	EDIA manpower is being ramped down as the design and pre-production efforts draw to a close. The increase in technician work force has been slowed to better match the ramp-up in production rate.
4	Strongly consider making Q2P2 (the second prototype) the first production magnet.	The decision was made to eliminate the second prototype because of the successful performance of the first prototype. A cold mass production readiness review was conducted and production of cold masses has begun.

IR Absorbers (WBS 1.1.4)		
1	Encourage CERN participation in the acceptance test of the first absorbers (and feedboxes) at LBNL.	CERN will be asked to review and approve the Acceptance Plans now being prepared, and will be encouraged to participate in the acceptance tests of the first units at LBNL.

IR Feedboxes (WBS 1.1.3)		
1	Encourage CERN participation in the acceptance test of the first (absorbers and) feedboxes at LBNL.	CERN will be asked to review and approve the Acceptance Plans now being prepared, and will be encouraged to participate in the acceptance tests of the first units at LBNL. Acceptance testing of the first HTS leads is planned to take place at CERN in November.
2	Assign a full-time manager to the feedboxes portion of the project.	LBNL management has assigned a full-time, experienced project engineer to manage the feedboxes. He will also provide engineering oversight of the absorber production.

IR and RF Region Dipoles (WBS 1.1.2 and 1.2.1)		
1	Senior BNL management must stay fully engaged to ensure that the project is completed on time and budget.	The Magnet Division Head is directly leading the effort at BNL. He is involved at an appropriate day-to-day level to ensure resources are available as planned, manpower is utilized in a cost effective fashion, and schedules are maintained. He is monitoring issues such as technical scope and Baseline Change Requests.
2	Detailed project performance analysis is required to avoid cost overruns. Additional BNL staff support should be provided to perform this function.	The BNL Magnet Division Head has determined he has adequate staff support to monitor project performance.

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Recommendation Text		Status
Superconducting Wire and Cable (WBS 1.3)		
	(No recommendations)	
Accelerator Physics (WBS 1.4)		
	(No recommendations)	
Cost and Schedule		
1	Continue efforts to increase contingency in order to re-establish total project contingency at approximately 20 percent of the cost estimate to complete.	New baselines have been developed for all project elements except the feedboxes, using realistic estimates based on recent data and including cost reductions where appropriate. Additional contingency has been generated by changes in work scope which do not affect our commitments to CERN. (See next recommendation.)
2	Continue to evaluate the detailed project scope to reduce costs without jeopardizing commitments to CERN.	The project has taken advantage of revisions to the optics layout in IR4 to work with CERN to reduce, by six, the number of magnets supplied by BNL while maintaining the same functionality. The accelerator physics effort for FY 2002 has also been reduced. Other potential cost reductions are being aggressively pursued.
Management		
1	Establish project contingency at 20 percent of the cost to complete.	The project contingency has been pushed up since the last quarter, but at 19% still remains slightly below the goal of 20%.
2	Examine whether additional staff is needed in the Project Office to monitor sub-project costs and schedule.	Within the Project Office there are two individuals responsible for monitoring sub-project costs and schedules, ensuring that the data are accurate and current, and evaluating the project performance against baseline. One concentrates particularly on Fermilab and the other monitors the Project as a whole (including Fermilab). We have determined that this level of staffing is sufficient.
3	Provide, by the next quarterly status meeting, a complete technical, cost and schedule plan for participation in the first octant test at LHC in 2004.	Efforts have begun in developing a plan for participation in the LHC octant test in 2004, but a full plan does not yet exist.
4	The U.S. LHC Accelerator Project Manager should exercise caution in the review and approval of additional baseline change requests.	No work scope increases have been approved since the last review.
5	Conduct a project-wide cost and risk analysis with the goal of mitigating cost overruns beyond the available contingency.	No formal action has been taken yet. The Project Office has asked each of the labs to rebaseline their activities looking at realistic estimates based on recent data and ways to reduce costs.